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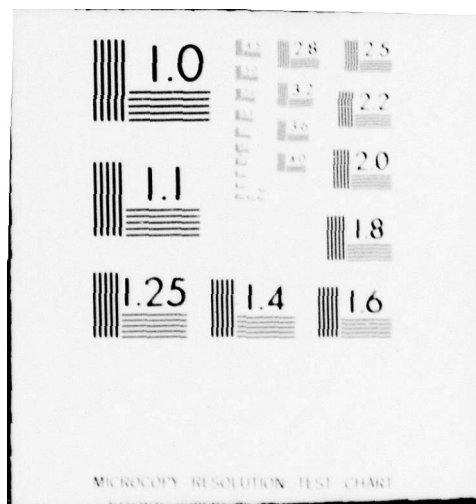
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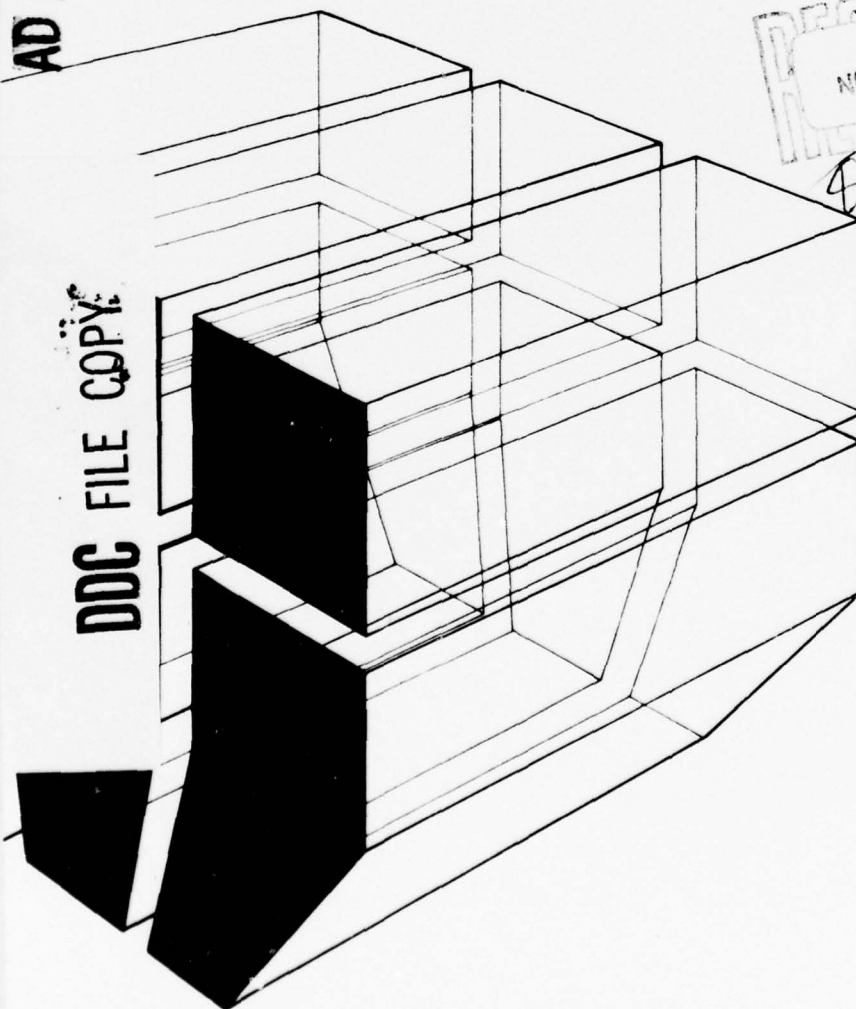
TYPICAL CONTRACT SPECIFICATIONS
FOR COLLECTION OF REFUSE AND
SANITARY-LANDFILL OPERATIONS

AD A061 638



by
Bernard Donahue
John Cannon
Harry Becker

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<p>This report presents the results of an investigation to determine guide specifications for solid waste collection and disposal. The investigators reviewed existing TRADOC solid-waste contracts with respect to their legal correctness, completeness, simplicity, and ability to address the most recent resource recovery requirements. A single</p>		

Block 20 continued.

→ model contract, which addresses the requirements of the Resource Conservation and Recovery Act of 1976, was written from the best of the existing contracts.

This general solid-waste management contract contains pertinent information on solid-waste collection, resource recovery, and sanitary-landfill operation.

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FOREWORD

This investigation was performed for the Directorate of Military Construction, Office of the Chief of Engineers (OCE), under Project 4A762720A896, "Environmental Quality for Construction and Operation of Military Facilities"; Task 02, "Pollution Abatement System"; Work Unit 007, "Solid Waste Management, Recycle, Resource Recovery for Military Facilities." The applicable QCR is 1.03.006(4). The OCE Technical Monitor was Mr. A. P. Norwood.

This work was performed by the Environmental Engineering Team (ENE), Environmental Division (EN), U.S. Army Corps of Engineers Construction Engineering Research Laboratory (CERL). Dr. R. K. Jain is Chief of EN. COL J. E. Hays is Commander and Director of CERL, and Dr. L. R. Shaffer is Technical Director.

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TYPICAL CONTRACT SPECIFICATIONS FOR COLLECTION OF REFUSE AND SANITARY-LANDFILL OPERATIONS

I INTRODUCTION

Background

The new requirements of environmental regulations and of the Resource Conservation and Recovery Act of 1976 (PL94-580) have affected the collection of solid waste and operation of sanitary landfills at many Army installations. As a result, the U.S. Army TRADOC headquarters has received numerous requests for technical assistance in preparing contract specifications for solid-waste-collection and sanitary-landfill operations. A standardized contract for these operations seemed the most effective and least costly answer to these requests.

Objective

The objective of this study was to prepare for TRADOC installations a standard refuse-collection and sanitary-landfill-operation contract specification that would include all pertinent and essential contractual elements and incorporate the requirements of the Resource Conservation and Recovery Act of 1976.

Approach

TRADOC headquarters asked each installation to send them a copy of their refuse collection and disposal contract. TRADOC headquarters then forwarded to CERL refuse-collection contracts from 13 installations. CERL sanitary engineers evaluated all the contracts and assembled what they considered the best single contract, using various existing elements as well as incorporating essential new elements. Most of the added elements were related to requirements of the Resource Conservation and Recovery Act of 1976. The investigators also analyzed and synthesized the assembled information into standard specifications for collection of refuse and operation of sanitary landfills.

Scope

The standard refuse-collection contract produced by this project is for use only by TRADOC installations. Other Army installations should not use this contract because of the possible difference in waste characteristics and handling procedures.

Mode of Technology Transfer

This report is expected to be issued as a TRADOC policy letter for field implementation and technology transfer.

2 SPECIFICATIONS FOR COLLECTION OF REFUSE AND MATERIALS

General Specifications

Collection and Disposal Service

The Contractor shall furnish all refuse disposal service, as specified by the Contracting Officer's Representative, in all Family Housing Areas and at all other buildings as specified by, and in accordance with, all items and conditions of this contract.

Scope

The Contractor shall furnish all plant labor, equipment, materials, and essentials needed to perform all operations in connection with the work and to comply with the specifications of this contract.

Licenses, Permits, and Bonds

The Contractor shall provide at his expense all licenses, permits, and bonds required by the state, county, and municipality in which he will operate any type of motor vehicle. Failure to meet this requirement will be cause for rejection of the bid. Vehicles driven on and off a reservation or post must have a state license. Vehicles left on a reservation or post need not be licensed, but must comply with all Army post or reservation vehicle regulations.

Any vehicle operated by the Contractor on a post or reservation must meet applicable state safety standards and regulations of the Installation safety officer and must have on or in the vehicle proof of such conformance. All vehicles must be registered with the office of the Provost Marshal or equivalent office on a post or reservation. The Contractor must pay any registration fees.

The Contractor shall submit evidence of insurance on all vehicles. Operators or drivers of all Contractor-owned or -operated vehicles must possess valid state licenses or permits to operate the vehicles assigned to them.

Environmental Pollution Standards

The Contractor shall comply with all Federal, state, and local environmental laws, regulations, and standards. The Contractor must sufficiently understand these environmental laws, regulations, and standards, and exercise due care to avoid any operating practices that might place the Government in a controversial position or contribute to local environmental pollution.

The Health and Environmental Activity office of the Installation can inspect the Contractor's operations, and the Chief of that office can insist that the Contractor maintain acceptable sanitary conditions and meet all other conditions specified in this contract.

Fire Prevention and Regulations

The Contractor shall comply with all Federal, state, and local fire regulations.

Pre-Inspection of Collection Areas

Bidders shall visit all collection sites to determine the quantity and quality of the waste generated and the quantity and type of salvable materials which the installation generates. Bidders should take seasonal variations into account when making these determinations. Arrangements to visit the collection sites should be made through the Facilities Engineer, as specified in this contract.

Bidding Estimate Omissions

The Contractor shall be responsible for satisfying himself as to any matters which affect the nature or cost of work, location of the work, nature of the work, under this contract, including any general local conditions such as those having a bearing on transportation, handling of materials, disposal, water availability, labor, electric power, roads, weather conditions, and character and quantity of the waste to be encountered, and the type and amount of equipment and facilities needed prior to and during the performance of the work. The Contractor is responsible for properly estimating the cost and difficulty of bidding the job successfully and for acquainting himself with all available information concerning these conditions. Neither failure by the Contractor to check work specifications thoroughly and report to the Contracting Officer any errors or omissions discovered in ample time prior to the bid opening nor failure by the Contractor to estimate the job properly will release the Contractor from successfully accomplishing the work as specified in this contract, or be cause for issuing change orders to the contract.

Right of Inspection by the Government

The Government reserves the right to make such inspections as are necessary to assure that the Contractor fulfills the specifications. Should it be found that the Contractor has not satisfactorily fulfilled the specifications, the Government may immediately demand that the Contractor meet the contract requirements. If the Contractor fails to comply with such demands or fails to initiate corrective action within seven days from the time the Government established violation of specifications, the Government can, by written notice to the Contractor, terminate his right to proceed with the work. The Government may then take

over the work and proceed to completion, by contract or otherwise, and the Contractor shall be liable to the Government for any excess cost occasioned thereby, as provided for under the clause to this contract entitled "ASPR7-103.11, Default."

Liability

The Contractor shall be liable for injuries or damages to persons or property due to willful misconduct or negligent acts by him or his employees, as provided for under the clause to this contract entitled "ASPR7-1912, Limitation of Liability--Service Contract." This contract does not affect the responsibility of the Government for injuries and damages to persons or property while on or about the Government's premises.

Glossary

As used throughout this contract, the following terms shall have the meanings set forth below.

Ashes

The residue from burned wood, coal, coke, and other combustible material.

Burning Pit

A three-sided earth revetment above or below grade, or a masonry inclosure, where combustible refuse and debris are burned, the residue either being buried in place or hauled to a regulated sanitary landfill.

Commercial Solid Waste

All types of solid waste generated by stores, offices, clubs, cafeterias, mess halls, warehouses, and other such nonmanufacturing activities, and nonprocessing waste generated at industrial facilities, such as packing wastes and paper products. This category does not include construction and demolition wastes.

Debris

Grass cuttings, tree trimmings, stumps, street sweepings, roofing and construction wastes, and similar waste materials.

Facility

Any buildings, installation, structure, land or public work owned by or leased to the Army. Ships at sea, aircraft in the air or forces on maneuvers are not subject to this directive.

Garbage

Animal and vegetable waste and containers resulting from the handling, preparation, cooking, and consumption of foods. Edible garbage, or hog-food, is the portion of waste food segregated for salvage.

Garbage Grinder

A mechanical device which grinds garbage and flushes the ground particles into a sanitary sewer.

High-Grade Paper

Includes letterhead, dry copy papers, miscellaneous business forms, stationery, typing paper, tablet sheets, and computer printout paper and cards, commonly sold as "white ledger," "computer printout," and "tab card" grade by the wastepaper industry. High-grade paper is considered commercial solid waste.

Incineration

The process of burning refuse in an incinerator.

Incinerator

A self-inclosed furnace designed for burning combustible refuse.

Institutional Solid Waste

Solid waste originating from educational, health care, correctional and other such facilities.

Managing Activity

An administrative element assigned to manage the program (including personnel, funds, and equipment).

Office Waste

Solid waste generated in the building, room, or series of rooms in which businessmen or professionals, branches of government, etc., carry on their affairs. Excludes waste generated in cafeterias, snack bars, or other food preparation and sales activities and wastes separated by medical personnel as hazardous.

Pickup Stations

Designated locations where refuse may be conveniently and efficiently assembled and stored in containers for collection.

Refuse Collection

A system of transporting refuse, including nonaccountable salvage, from pickup stations to points of disposal. (Includes hauling garbage to the transfer station when required by the terms of a salvage contract.)

Receptacles or Containers

Cans, drums, bins, or similar receptacles which can be handled easily, and multiple containers handled by mechanical, truck-mounted hoists.

Recoverable Resources

Materials that, having served their original purpose, have useful physical or chemical properties and can be reused or recycled.

Recycling

The process of transforming recovered materials into new/usable products.

Refuse

All garbage, ashes, debris, rubbish, and other similar waste material. Not included are explosive and incendiary wastes and contaminated wastes from medical and radiological processes.

Refuse Collection

A system of transporting refuse, including nonaccountable salvage, from pickup stations to points of disposal. It includes hauling garbage to the transfer station when required by the terms of a salvage contract.

Refuse Disposal

The ultimate act of destroying, burning, burying, or otherwise disposing of refuse.

Residential Solid Waste

Includes garbage, rubbish, trash, and other solid waste resulting from the normal activities of households.

Resource Recovery

The process of obtaining materials or energy from solid waste.

Resource Recovery Facility

Any physical plant that processes residential, commercial, or institutional solid waste biologically, chemically, or physically, and recovers useful products, such as shredded fuel, combustible oil or gas, steam, metal, glass, etc., for resale or reuse.

Rubbish

A variety of unsalvageable waste materials, such as metal, glass, crockery, floor sweepings, paper, wrappings, containers, cartons, and similar articles not used in preparing or dispensing food.

Salvage or Salvable Materials

Metal scrap, scrap lumber, crating materials, empty barrels, boxes, textile bags, waste paper, cartons, kitchen waste, and similar materials which are reclaimable or have sales value and are not subject to property accountability. These items are segregated at the pickup station.

Sanitary Fill

A method of disposing of refuse by compacting it without burning, covering it daily with a layer of compacted earth, and forming it into cells sealed by earth walls and cover.

Segregation of Materials

The process of sorting refuse, debris, and salvage and placing the sorted materials in designated receptacles at the pickup station.

Sludge

The accumulated semiliquid suspension of settled solids deposited from waste waters or other fluids in tanks or basins.

Solid Waste

Includes garbage, refuse, and other solid materials, such as those from institutional, industrial, commercial, and agricultural operations, and from community activities. Mining and agricultural solid wastes, hazardous wastes, sludges, construction and demolition wastes, and infectious wastes are not included in this category for purposes related to recycling.

Source Separation

The separation of recyclable materials at their points of generation by the generator.

Multiple Container Solid Waste Collection System

Vehicles and container boxes used for collecting solid waste and hauling it to the disposal facility. Collection equipment is of two principal types. One type uses a special hoisting truck to carry the container box directly to the disposal site; the other type empties the container directly into the hopper of a compaction-type refuse collection truck. For the purposes of this regulation, multiple containers are the container boxes, normally from 1 to 10 cubic yards in capacity, used in conjunction with these solid-waste collection vehicles.

Technical Specifications

Collection Equipment Requirements

All vehicles used for the collection and transportation of solid waste (or of materials which have been separated for recycling) shall meet all applicable standards established by the Federal Government. These standards include, but are not limited to, Motor Carrier Safety Standards (49 CFR, Parts 390-396) and Noise Emission Standards for Motor Carriers Engaged in Interstate Commerce (40 CFR, Part 202). Army-owned collection vehicles must meet the Federal Motor Vehicle Safety Standards (49 CFR, Parts 500-580).

All vehicles used for the collection and transportation of solid waste (or of materials which have been separated for recycling) shall be enclosed or have adequate provisions for suitable cover, to avoid spillage while in transit.

The Contractor shall construct, operate, and maintain the equipment used in comparing, collecting, and transporting solid waste (or materials which have been separated for recycling) so as to minimize health and safety hazards to solid-waste management personnel and the public. The Contractor must maintain and keep this equipment clean to prevent propagating or attracting vectors or creating nuisances.

The following types of equipment used for the collection, storage, and transportation of solid waste (or materials which have been separated for recycling) must meet the standards established by the American National Standards Institute (ANSI Z345.1, Safety Standards for Refuse Collection Equipment) as of the effective date(s) established in ANSI Z245.1:

1. Rear-loading compaction equipment
2. Side-loading compaction equipment
3. Front-loading compaction equipment

4. Tilt-frame equipment
5. Hoist-type equipment
6. Satellite vehicles
7. Special collection compaction equipment
8. Stationary compaction equipment
9. General purpose vehicles
10. Compartmentalized vehicles
11. Trailers.

If new collection equipment which meets these standards is available before the effective dates of ANSI Z245.1, the Contractor shall procure it.

All refuse-collecting equipment shall display the name and address of the Contractor on each door of the cab.

If general-purpose vehicles fail to conform or comply with standards of maintenance or repair, as required by Army regulations or directives and shown by the inspection of the Contracting Officer, the Contractor must repair or replace such vehicles without delay. He must provide standby vehicles, when required, to maintain scheduled operations.

The Government shall furnish truck-washing facilities on post at no cost to the Contractor. The Contractor must pay for the utilities, keep the washing areas clean and sanitary after each washing, and supply his own portable steam equipment when not available from the Government.

The Contractor shall have enough collection vehicles that meet the approval of the Contracting Officer to collect refuse and materials for recycling. These vehicles must meet the scheduling specifications of this contract to the satisfaction of the Contracting Officer.

Contractor-Furnished Vehicles

The Contractor shall list in detail in paragraph 2 the equipment which he proposes to supply in order to meet the total requirements under this contract and submit this list with his bid. This list shall provide the following information for each item of equipment:

- a. The brand name of the equipment, model, type, size, age, capacity, and a statement of condition. This information shall be detailed

enough so that the Contracting Officer can readily evaluate and identify the equipment. The following format should be used:

<u>Item of Equipment</u>	<u>Type</u>	<u>Size</u>	<u>Make</u>	<u>Model</u>	<u>Year</u>	<u>Capacity</u>	<u>Specific Condition</u>
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(1)

(2)

(3)

(4)

(5)

etc.

b. The location of the equipment.

c. If the Contractor intends to furnish new equipment, detailed information or manufacturer's literature with a statement that the equipment will be purchased new for this job is sufficient.

d. The contract shall not be awarded until the equipment listed in paragraph 2a has been inspected to insure that it complies with the requirements of this specification.

The Contracting Officer or his representative shall inspect the equipment within 10 days after the date of opening of bids at a specified location.

When the Contracting Officer has approved the equipment and the contract is in effect, the Contractor shall provide all items of equipment listed and approved and place the equipment in operation with competent operators who have regular refuse-handling duties. The Contractor may not modify in any way the amounts or types of equipment listed in these specifications to meet the performance requirements of this contract without the approval of the Contracting Officer.

Inspection

All services performed by the Contractor under this contract and the physical and mechanical condition of all Contractor-owned and furnished equipment are subject at all times to inspection by the Contracting Officer. Any unsatisfactory work called to the attention of the Contractor in writing must be corrected within 24 hours of receiving the verification. The Contractor must correct the work at his own expense or payment to him will be delayed until he does correct the necessary items.

The Contractor shall inspect the mechanical and physical condition of his equipment at least once a week throughout the contract period, and he will maintain it in order to complete the job successfully throughout this period. The Contractor shall also empty garbage and refuse cans so as to avoid leaving trash, garbage, or refuse on the premises. If the Contracting Officer inspects and observes any debris such as garbage, trash, or refuse caused by the Contractor, he can clean the areas himself and charge this time to the Contractor.

Collection Management

The Contractor shall designate in writing to the Contracting Officer a representative who will direct the Contractor's working force and operations in accordance with these specifications. This representative shall have enough authority to enable him to meet conditions which arise in daily operations without undue delay.

The Contractor's representative must telephone or meet with the Contracting Officer's representative twice a day during the Installation's normal working hours on collection days to receive any complaints about the work accomplished. Any work not accomplished in accordance with the provisions of this contract must be corrected before 1600 hours of the same day at no additional cost to the Government. Failure to correct these deficiencies may be cause for termination of the contract, as described in ASPR 7-103.11, "Default." A written report to the Contracting Officer or his representative from the Contractor's representative, describing in detail the deficiency and how and when it was corrected, will certify accomplishment of the work.

The Contractor shall maintain an office with a listed telephone number on the Installation provided by the Government. The Contractor or his representative must man the telephone at all times during regular working hours on collection days or must be available via CB radios, etc. Incoming calls should be able to go to the Contractor's representative for action on complaints and deficiencies in operation and execution of this contract. The Contractor may locate the office at a later date, but he must do so prior to initial execution of this contract.

Contractor's Employees

The Contractor shall furnish all the personnel required to efficiently conduct all the work necessary to perform the services required by these specifications. The Contractor's personnel shall be capable, clean, and experienced in this type of work, and shall at all times while on duty wear a Contractor identification badge, cap, or other suitable uniform patch.

Removal of Contractor's Employees

The Contracting Officer may require that the Contractor remove from the job any employee who endangers others or property or whose continued employment is inconsistent with the interests of military security.

Collection Management

The Contractor must collect solid wastes (or materials separated by recycling) in a safe, efficient manner, and in strict compliance with all applicable traffic and other laws. The collection vehicle operator must immediately clean up all spillage caused by his operations, protect private and public property from damage resulting from his operations, and avoid unduly disturbing the peace and quiet of residential areas in and through which he operates.

Curbside Collection

Curbside or service-drive solid-waste collection shall be used in family housing areas, unless the Contractor can show that another collection system provides a cost or environmental advantage to the Government. The Contractor must support his use of other than curbside or service-drive collection by an economic or environmental analysis submitted at least 30 days before intended implementation. The Contracting Officer will retain this written analysis for installation records.

Performance Requirements

The (Government/Contractor) shall provide refuse containers varying in size from 24 to 88 gallons at points of light-volume refuse generation. At points of heavy generation such as messhalls, warehouses, and commissaries, the (Government/Contractor) shall provide the necessary number of multiple refuse containers. The Contractor must provide all necessary pickup equipment including packer and hoist-haul trucks. If the Contractor elects to increase the number of multiple containers to improve the efficiency of operation or to alter the system of operations, he may do so, subject to the prior approval of the Contracting Officer, by furnishing the additional equipment and trucks at his own expense. The Contractor may also combine or relocate pickup points or revise route diagrams, with the prior approval of the Contracting Officer. The Government reserves the right to relocate any or all containers, to decrease or increase the number of the containers used at any time in the interest of the Government, and the Contractor shall adjust his service to meet such relocations, increases, or decreases without additional expense to the Government. In the case of increases, the additional container or containers shall be placed in service by the (Government/Contractor) at no cost to the (Contractor/Government).

The collection schedule below will guide development of a plan for collecting refuse and materials for recycling. This schedule shows the

location, size of container, and proposed necessary frequency of collection. The Contractor may change other frequencies if the Contracting Officer's representative determines that the end results are satisfactory. The Contractor shall submit the refuse collection and disposal plan within 10 days from notice to proceed. The Contractor shall establish his working hours during normal work days (Monday through Friday) to coincide with the regular working hours of the installation. Working hours required beyond the normal 40-hour week must be approved by the Contracting Officer and will be furnished at no additional cost to the Government.

The Contractor must collect and dispose of refuse on all holidays which fall on normal duty days (Monday through Friday), except for Christmas and New Year's Day.

The Contractor will pick up refuse at the following locations and on the days specified below. At the Contracting Officer's discretion, the Contractor must make additional collections at some of the locations listed below if the volume of refuse so dictates.

COLLECTION SCHEDULE

Family Housing

1. Monthly pickup service
2. Twice-per-month pickup service
3. Weekly pickup service
4. Twice-per-week pickup service

Post-Wide (other than family housing)

1. Monthly pickup service
2. Twice-per-month pickup service
3. Weekly pickup service
4. Twice-per-week pickup service
5. Three-times-per-week pickup service
6. Daily pickup service
7. Twice-per-day pickup service

FAMILY HOUSING

<u>Housing Area</u>	<u>Collection Schedule for Refuse</u>	<u>Collection Schedule for Recyclables</u>
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POST-WIDE

<u>Area</u>	<u>Collection Schedule for Refuse</u>	<u>Collection Schedule for Recyclables</u>
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Pickup Routes

The Contracting Officer shall furnish complete military reservation maps with building numbers and sites of pickup locations and make available a representative of the Contracting Officer to accompany the Contractor for up to 10 working days, in order to familiarize the Contractor with locations and routes to the pickup locations as specified in the section labeled "Performance Requirements."

Pickup Procedure

All refuse shall be collected from the point at which it is set out by the discarding unit. The Contractor shall collect all refuse and materials separated for recycling from the point at which it is set. The only exception will be for any housing project which has storage

areas, in which case the Contractor shall pick up the cans at the building storage area, empty them into the collection truck and return them to the storage area.

The Contractor shall handle all Government-owned receptacles carefully, not throw them upon the ground, replace them in their proper position or location, and replace the covers on the cans. Collectors on foot shall use sidewalks, if any, or other established walks or paths.

Unnecessary trespassing on grassed areas and around family quarters is prohibited, and no collection vehicle may use the driveways of family quarters, or travel any route which is not specifically designated for use by vehicular traffic.

Delivery Procedures

The Contractor shall take all refuse and material separated for recycling promptly to either the sanitary landfill, thermal processing center, or recycling center.

The Contractor shall not store in vehicles or dump it in an unauthorized area. When refuse material is disposed of through thermal processing, the Contracting Officer shall designate an alternative disposal route for use during equipment failures.

The Contractor shall deliver material separated for recycling to the recycling center, being careful not to mix the recyclable material with refuse. When the discharging unit contaminates material which should be separated for recycling, the Contractor will notify the Directorate of Facilities and Engineering (DFAE) when and where he picked up the material. The DFAE may then determine that the contaminated material should be delivered to the sanitary landfill.

When the Contractor sets up scales to weigh refuse and material separated for recycling, he shall weigh and record the required information on appropriate forms.

3 SAMPLE CONTRACT FOR
SANITARY LANDFILL OPERATIONS*

The following are suggested provisions to be included in instructions to prospective bidders.

1. Intent and Purpose. The intent and purpose of this contract is to assure the healthful and aesthetic operation of a sanitary landfill, at one or more sites, where solid wastes originating with the Installation, or for which the Installation has accepted responsibility, will be disposed of.

2. Qualifications of Bidders. All bidders must furnish satisfactory evidence to the Installation that they have operated or are presently operating a sanitary landfill of the type and capacity involved here. (A description of the solid wastes, including expected daily quantities and a detailed plan of the sanitary landfill site must be included for all the bidders.) The bidders must also show that they have successfully operated a sanitary landfill in a manner required by the attached ordinances for a long enough time that they will be able to operate under varied weather conditions in this area. (The Installation must develop regulations or standards, similar to those included in this publication that define the site and operational requirements to assure performance and protection of the environment.) They must list all sanitary landfill sites they have completed or are now operating; all operating sites must be available for inspection by the Facilities Engineer to determine the bidder's eligibility.

Bidders without the experience outlined above but with sufficient experience in a comparable field, such as excavating or grading, should show an association with (a) consultant(s) and/or operator(s) qualified to assist in engineering, planning, supervising, and operating the project in accordance with the attached recommendations or ordinances. The name(s) and experience of the consultant(s) and/or operator(s) shall be contained in an attachment to the bid.

All bidders shall attach to the bid a list of the qualifications of personnel who have agreed to work for the bidder in the operation of this contract.

All bidders shall supply detailed inventories of their equipment, showing each type by model, year of manufacture, anticipated remaining useful life, and all accessories for each piece so listed. All leased equipment shall be separately listed and show the time remaining on each leased machine and any options of renewal. All new equipment to be acquired in fulfillment of this contract must be available on the date

* EPA SW86TS, 1971, formed the basis for this sample contract which has been tailored to meet Army needs.

when operations start. The bidder shall attach delivery guarantees by manufacturers to his bid.

All bidders must demonstrate to the satisfaction of the Installation that they have adequate financial resources, experienced personnel, and expertise to perform the services required by the specifications.

All bidders shall be held to comply with all pertinent legislation, including the Solid Waste Disposal Act of the State of _____, the rules and regulations promulgated thereunder, the applicable/ attached ordinances, rules and regulations of the Installation, and the ordinances, rules and regulations of the County(ies) of _____. The bidder selected shall meet all the requirements of the above, including any changes, copies of which will be supplied to him by the Installation.

3. Compensation. Payment will be by the ton, cubic yard, or load, of solid waste collected by the Installation (or its designated agents), delivered and received for disposal as set forth in a schedule attached to the agreement. Exact quantities of solid waste per contract year cannot be specified, but the minimum contract year compensation will be \$ _____ based on an estimated weight (volume) (number) of _____ tons (cubic yards) (loads). Adjustments in fees due to changing costs of doing business must be provided for in the contract document.

4. Inspection of Site. All bidders shall visit the site of the proposed landfill and familiarize themselves with the project, including all requirements of the plan. Submission of a bid will signify to the Installation that the bidder has visited the site, and it shall constitute a waiver of all claims of error in bid, withdrawal of bid, payment of extras, or any combination of claims under the executed contract or its revisions.

5. Bonds.

a. Performance Bond. The successful bidder must offer a performance bond. It shall be executed yearly by a surety company licensed to do business in this State. It will be in an amount equal to 50 percent of the sum shown in paragraph 3 for the first year, or, in the case of renewal, 50 percent of the total compensation paid in the past year for each succeeding year. Said bond shall be obtained within ten (10) days of the execution of the initial contract and of each renewal.

b. Payment Bond. The successful bidder must offer a payment bond. It shall be executed by a surety company licensed to do business in this State and be in an amount to be determined by the Installation. It must guarantee the payment of all wages and costs of materials, supplies, and insurance premiums incurred by the Contractor in fulfilling the terms of the contract. The bidder must deliver this bond to the Installation within ten (10) days of signing the agreement. Insurance premiums

include, but are not limited to, workmen's compensation, liability insurance, and bonds. The payment bond will probably not exceed the sum expended for wages, materials, supplies, and insurance premiums in one quarter of operation.

c. Bid Bond. Every bidder shall furnish a bid bond executed by a surety company licensed to do business in this State. He binds himself to indemnify the Installation against any loss (not to exceed the sum of the bond) it incurs should he fail to execute the signed agreement. The bid bond will equal 10 percent of the sum shown in paragraph 3.

A certified check, payable to the Installation, or other personal property acceptable to the Installation, may be deposited in lieu of a bid bond. Following determination of the agreement, the three low bidders' securities will be held until the execution of the agreement, at which time said security shall be returned to the respective owners.

6. Indemnity Clause. An indemnity clause, or alternatively, liability insurance, will be required of the successful bidder. The clause will require him to hold harmless and indemnify the Installation from all claims, legal or equitable (including court costs and reasonable attorney's fees), arising out of his operations.

7. Insurance. The Installation may set motor vehicle minimums for property damage and personal injury. Each bidder must show proof of all required insurance and policy limits by certificates of required insurance provided to the Installation. Each policy will have a minimum cancellation period of not less than thirty (30) days, to become effective after delivery, in writing, to the Installation at the address shown in the agreement. While the Installation requires no minimum policy period, the Contractor will probably want to use long-term policies in order to obtain lower premiums.

8. List of Officers and Stockholders. Bidders shall submit a list of all officers and stockholders who own over 10 percent of their respective companies.

9. Contractor's Operational Plan. The contractor shall submit as an attachment to his bid a detailed plan of operation that conforms with the attached specifications. It shall also give details regarding alternate procedures that will be followed in case of equipment failure brought on by severe weather.

Model Sanitary Landfill Operation Agreement

This agreement made and entered into this _____ day of 19____, by and between _____ (an Installation), hereinafter referred to as the Installation and _____ (a Corporation or a Partnership, Proprietorship, etc.), organized under the laws of the State of _____,

and having its principal place of business at _____, hereinafter referred to as the Contractor.

WITNESSETH:

Whereas, the Contractor is qualified to operate a sanitary landfill for the disposal of solid waste in accordance with the attached ordinances, specifications, and Instructions to Bidders; and

Whereas, the Installation desires the Contractor to operate the site(s) designated to be used for a sanitary landfill operation;

Now therefore, in consideration of the mutual covenants and agreements contained herein, and of the consideration to be paid by the Installation to the Contractor, as hereinafter set forth, the Contractor will perform the following tasks:

1. Disposal Site. All solid wastes shall be disposed of at the location(s) specified herein, same being the property under the control of the Installation (or Contractor), and more specifically described as follows:

(Insert Legal Description)

2. Materials to be Disposed of. The Contractor shall accept, upon payment of fees as scheduled, all solid waste created within the jurisdiction of the Installation or for which the Installation has accepted responsibility. Toxic, volatile, and other hazardous materials must be clearly identified to allow for special handling during disposal. (Note: A definition of the solid wastes to be disposed of under the provisions of the contract should be included here. In addition, clarification of who shall be allowed to deliver solid waste to the site must be provided.)

3. Operation of Site(s). The Contractor shall have the exclusive right and responsibility to operate the disposal site(s) in accordance with the provisions of this Agreement and the attached ordinances and specifications for the term of this Agreement and any extension thereof.

4. Compliance with Laws. The Contractor shall operate the disposal site(s) in compliance with all applicable laws, ordinances, specifications and regulations, including the applicable solid waste disposal act of the State of _____, the rules and regulations of the State Board of Health and the City and/or County Board of Health, and the regulations of the Installation; copies of each are attached and are a part of this Agreement. The Installation shall furnish copies of all such laws, ordinances, and regulations to the Contractor and shall include new legislation as well as amendments.

5. Labor and Equipment. The Contractor shall furnish all labor, tools, and equipment necessary to operate the site(s) and shall be responsible for all required site maintenance. An experienced and qualified person shall be provided at all times when the sanitary landfill is open.

6. Service Facilities. Unless otherwise provided by the Installation, the Contractor shall construct and maintain at his expense any facilities, improvements, and buildings within the site necessary for its operation.

(To be included if the site is Installation property: The use of such land within the site shall be made available to the Contractor free of charge for the period of this Agreement or any extension thereof. At the expiration of this Agreement all permanent structures and improvements become the property of the Installation or shall be removed by the Contractor, at the option of the Installation. If permanent structures and improvements become the property of the Installation, there should be some compensation to the Contractor, such as book value or fair market value. If the Contractor is required to remove such structures and improvements, he should be paid for doing so.)

7. Off-Site Improvements. The Installation agrees to provide, at its expense, all required off-site improvements, including any required or public streets or roads, drainage facilities, etc. It shall also provide to the site all required utilities, including adequate power and water supplies. (If any of this work is to be performed by the Contractor, it should be included in a separate contract with detailed engineering plans.)

8. Charges for Utilities. The Contractor agrees to pay normal and standard charges for all water, electrical power, natural gas, and phone service used at the site. (If any of these services are to be provided free of charge by the Installation, this section should be modified accordingly.)

9. Salvage. Neither scavenging nor salvage operations shall be permitted at the operating face of the sanitary landfill. Salvage operations, if any, shall be conducted at a location separate from the operating face of the landfill by persons licensed by the Installation, so as not to interfere with the Contractor's operation.

10. Title to Waste. Title to waste shall vest, as it is deposited, in the owner of the fee simple estate.

11. Completion of the Site. Upon completion of disposal operations, the Contractor shall contour and finish the site in accordance with the Approved Final Plan, which is attached and is part of this Agreement. Both the Installation and the Contractor must agree to any changes of the Approved Final Plan. The liability of the Contractor under this Agreement shall cease upon acceptance of the site by the Installation.

12. Compensation. Compensation shall be paid pursuant to the attached schedule. (A schedule providing for payment by weight, volume, or load should be attached, and a minimum charge set out. Hazardous materials should be handled on a mandatory basis, with fees paid by type and quantity. Experience should soon establish fees for such materials.)

(If materials are to be accepted from users other than those paid for and designated by the Installation, a similar schedule of prices which the Contractor can charge these users should be established. There should be clear provisions regarding the distribution of such fees to the Contractor and/or the Installation.)

13. Changes in Regulations. In the event that compliance with subsequent statutes, ordinances and/or rules and regulations changes operating costs, the parties hereto agree to renegotiate this Agreement so that the compensation shown herein shall reflect such changes.

14. Change in Sanitary Landfill Site. In the event that the parties mutually agree to transfer said sanitary landfill operations to another site or additional sites, this Agreement shall be renegotiated to reflect any changes required. Changes will include, but not be limited to, increased compensation due to higher operating costs.

15. Change in Cost of Doing Business. The fees and/or compensation payable to the Contractor for the second and subsequent years of the term hereof shall be adjusted to reflect changes in the cost of doing business, as measured by fluctuations in the Consumer Price Index (CPI) published by the U.S. Department of Labor, Bureau of Labor Statistics, for the _____ area. At the start of the second year and every six (6) months thereafter, the fees and/or compensation to the Contractor shall be altered in a percentage amount equal to the net percentage change in the CPI as follows:

Compensation for the first six months of the second year shall reflect the change, if any, in the CPI during the first year of this Agreement.

Beginning with the seventh month of the second year of this Agreement and every six (6) months thereafter, the net change in compensation will be the change in the CPI over the preceding six (6) month period.

16. Term. The initial term of this Agreement shall be for the _____-year period beginning _____, 19____, and ending _____, 19____. The initial _____-year terms of this agreement shall be extended for successive additional _____-year term, unless one party notifies the other that it intends to terminate this Agreement. This intent must be conveyed in writing not less than ninety (90) days prior to the expiration of the initial _____-year term or of any _____-year extension.

17. Performance Bond. The Contractor shall furnish a Performance Bond for the faithful performance of this Agreement. Said bond shall be

executed by a surety company licensed to do business in this State and must be in a penal sum equal to 50 percent of the minimum compensation to be paid to the Contractor for the last preceding year. Said Performance Bond shall be furnished annually by the Contractor within ten (10) days of the execution of this Agreement or its extension. It shall indemnify the Installation against any loss resulting from any failure of performance by the Contractor, not exceeding, however, the penal sum of the bond.

18. Payment Bond. The Contractor shall within ten (10) days of the execution of this agreement, deliver or cause to be delivered to the Installation a bond in the amount of \$_____ executed by a surety company licensed to do business in this State. It shall guarantee payment of wages to all employees of the Contractor at the site or sites and the cost of wages to all employees of the Contractor at the site or sites and the cost of all supplies, materials, and insurance premiums required to fulfill this Agreement.

19. Indemnity. The Contractor hereby binds himself to indemnify and hold harmless the Installation from all claims, demands and/or actions, legal and/or equitable, arising from the Contractor's operation of all disposal sites described above.

(Liability insurance policies approved by the Installation as to type and coverage may be required as a part of the indemnity provisions of this Agreement. If such policies as automobile liability, general liability, or owner's protective liability are required, the type and amount of coverage should be clearly spelled out in this section. Minimum motor vehicle liability limits set by State financial responsibility laws are seldom adequate.)

Proof of all insurance shall be furnished by the Contractor to the Installation by certificates of insurance. These certificates shall have a minimum cancellation time of thirty (30) days, commencing after delivery of said notice to the Installation at the address shown above.

20. Workmen's Compensation. The Contractor shall carry in a company authorized to transact business in the State of _____, a policy of insurance fulfilling all requirements of the Workmen's Compensation Act of the State, including all legal requirements for occupational diseases. (Would not apply in monopoly States.)

21. Standard of Performance. The Installation may move to act if the Contractor fails to dispose of the solid waste for more than five (5) consecutive working days or fails to operate the site in accordance with the attached ordinances and specifications for a similar period. (He shall not be held liable if such failure is due to war, insurrection, riot, Act of God, or any other cause or causes beyond his control.) The Installation may, at its option, after sending written notice to the Contractor as provided, take over and operate any or all of the equipment he uses in carrying out this Agreement, until such matter is resolved and the Contractor is

again able to operate. Any and all operating expenses incurred by the Installation in so doing may be deducted by it from compensation paid to the Contractor hereunder.

During such periods, the liability of the Installation to the Contractor for loss or damage to such equipment so used shall be that of the bailee for hire; ordinary wear and tear is specifically exempt from such liability. The liability of the Contractor to third persons shall cease, and all claims or demands arising out of the operation and/or control of the site or sites shall be directed solely to the Installation.

If the Contractor is unable for any cause to resume performance at the end of thirty (30) working days, all liability of the Installation under this contract shall cease, and the Installation shall be free to negotiate with other contractors regarding the operation of said site or sites. If Agreement with another contractor is reached, this shall not release the Contractor herein of his liability to the Installation for breach of this Agreement.

22. Arbitration. Any controversy or claim arising out of or relating to this Agreement, or breach thereof, shall be settled by arbitration in accordance with the Rules of The American Arbitration Association, and the judgment rendered may be entered in any court having jurisdiction thereof. Such controversy or claim shall be submitted to one arbitrator selected from the National Panel of The American Arbitration Association.

23. Landfill Inspection. To ensure that the detailed ordinances, specifications, regulations, and laws for the operation of a sanitary landfill are complied with, a representative of the Installation shall inspect the landfill site and operation at least once a week during the term of this Agreement. The Installation may inspect the sanitary landfill site accompanied by designated personnel during business hours.

24. Contractor's Personnel.

a. The Contractor shall assign a qualified person or persons to be in charge of his operations on the Installation and shall inform the Installation of these person or persons' identities with a description of their experience, etc.

b. The Contractor's employees may be required to wear clean uniforms that bear the company's name.

c. The Installation has the right to request the dismissal of any employee of the Contractor who violates any contract provision, or who is wanton, negligent, or discourteous in performing his duties.

d. The Contractor should provide suitable operating and safety training for all his personnel. The site should be staffed at all times with at least one employee who is trained in first aid and has a first aid kit.

e. Wages of all employees of the Contractor shall equal or exceed the minimum scales prevailing for similar work in the locality of the project. The wages for each classification of employee shall be provided to the Installation as an attachment to the bid document.

f. No person shall be denied employment by the Contractor by reason of race, creed, religion, sex, or national origin.

g. Employees of the Contractor shall have the right to organize and affiliate with recognized labor unions and shall have the right to collective bargaining.

25. Assignment. No assignment of this Agreement or any right occurring under it shall be made in whole or part by the Contractor without the express written consent of the Installation; in the event of any assignment, the assignee shall assume the liability of the Contractor.

26. Books and Records. The Contractor shall keep daily records of wastes received, and the Installation shall have the right to inspect the same insofar as they pertain to the operation of the sanitary landfill site(s). The records shall show: the type, weight, and volume of solid waste received; the portion of the landfill used, as determined by cross section and survey; any deviations made from the plan of operation; equipment maintenance; and cost records. The Contractor shall submit a proposed record and accounting system for approval. All information so obtained shall be confidential and shall not be released by the Installation unless expressly authorized in writing by the Contractor. (A recommended set of cost accounting records is in "An Accounting System for Solid Waste Collection" developed by the Federal solid waste management program.)

27. Bankruptcy. This Contract shall terminate in the case of bankruptcy, voluntary or involuntary, or insolvency of the Contractor. In the case of bankruptcy, such termination shall take effect on the day and at the time the bankruptcy is filed.

28. Number of Copies. This Agreement may be executed in any number of counterparts, all of which shall have the full force and effect of an original for all purposes.

29. Modification. This Agreement constitutes the entire Agreement and understanding between the parties hereto, and it shall not be considered modified, altered, changed, or amended in any respect unless in writing and signed by the parties hereto.

30. Right to Require Performance. The failure of the Installation at any time to require performance by the Contractor of any Contract provisions in no way affects the right of the Installation thereafter to enforce same. Nor shall waiver by the Installation of any breach of any provisions be taken or held to be a waiver of any succeeding breach of such provisions or as a waiver of any provision itself.

31. Point of Contact. All dealings, contacts, etc., between the Contractor and the Installation shall be directed by the Contractor to _____.

(Some duly designated official of the Installation must be identified to serve as the contact for the Contractor. A similar clause could designate the Contractor's contact.)

32. Illegal Provisions. If any provisions of this Agreement shall be declared illegal, void, or unenforceable, the other provisions shall not be affected and shall remain in full force and effect.

33. Notice. A letter addressed and sent by certified United States mail to either party at its business address, shown above, shall be sufficient notice whenever required for any purpose in this Agreement.

34. Effective Date. This contract shall become effective, and the Installation or its designated agents and citizens shall begin delivery of the solid waste to the Contractor _____ days after the date of execution hereof.

Fee Schedule

(Alternative methods of charge)

1. \$ _____ per ton of solid waste
2. \$ _____ per yard of compacted solid waste
3. \$ _____ per yard of uncompactd solid waste
4. \$ _____ minimum fee per load
5. \$ _____ per ton of solid waste, consisting solely of material such as bricks, concrete, dirt, etc.
6. The Installation shall pay the Contractor a minimum fee of \$ _____ as specified in this contract.

Toxic, volatile, or other hazardous materials requiring special handling shall be clearly marked by the Installation and, upon payment of mutually agreed upon fees, shall be disposed of by the Contractor pursuant to the terms of Item 2 of the contract and according to guidance provided by the Army Surgeon General.

The Contractor shall submit billings to the Installation at the close of business at the end of each month for all other waste placed in the sanitary landfill. Before the tenth day of the following month, the

Installation shall pay the Contractor. Payments shall be mailed to the Contractor at the address shown above.

4 CONCLUSIONS AND RECOMMENDATIONS

A standard contract specification for collection of refuse and a sample contract for sanitary-landfill operations have been developed. In developing the refuse and materials collection contract, emphasis was placed upon materials separated for recycling under the requirements of the Resource Conservation and Recovery Act.

The standardized contract specifications, presented in Chapters 2 and 3, should provide a cost-effective means for complying with the recent environmental requirements.

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Donahue, Bernard A

Typical contract specifications for collection of refuse and sanitary landfill operations / by Bernard A. Donahue, John Cannon, Harry Becker. - Champaign, IL : Construction Engineering Research Laboratory ; Springfield, VA : available from NTIS, 1978.
32 p. ; 27 cm. (Special report ; N-59)

1. Refuse and refuse disposal - specifications.
2. Sanitary landfills - specifications. I. Cannon, John. II. Becker, Harry. III. Title. IV. Series: U.S. Construction Engineering Research Laboratory. Special report ; N-59.